AQUATIC VASCULAR PLANTS NEW FOR ILLINOIS

A project involving collection and identification of submersed and floating aquatic plants was undertaken jointly by the Illinois State Museum and the Illinois Department of Conservation in 1964-65. Conservation biologists of the Division of Fisheries collected aquatic plants from hundreds of lakes, ponds and rivers throughout the state. In October 1965, at the close of the project, 1175 collections had been made. A uniform data sheet was included with each collection to insure accurate locality records for all specimens. The plants, sent by mail in heavy envelopes to the Illinois State Museum for study and processing, were kept moist in thin plastic bags. Notes on the data sheet enclosed in each bag, or with each collection, were made in pencil to prevent smudges. These data sheets were dried, numbered and filed for reference. Alvin Lopinot of the Department of Conservation and the writer are preparing a field manual to assist biologists and students in the identification of submersed and floating aquatic plants of Illinois. This manual will be particularly intended to help conservation biologists in the study and control of aquatic plants wherever their abundance interferes with fishing.

One result of the project described above was the identification of two submersed aquatic vascular plants new for Illinois. These plants are *Najas marina* L. and *Ruppia maritima* L. Specimens have been filed in the Illinois State Museum Herbarium.

Collection data are as follows: LAKE CO., *Najas marina* L., 2½ mi. NE. of the village of Grayslake. Submersed in 3 feet of water in Druce Lake. The plants were abundant and established over a large area. The clear water of this glacial lake had a pH of 8.4. Oct. 5, 1964, *G. S. Winterringer 22499* and *22503*. In Wooster Lake, 1 mi. SW. of the village of Long Lake, Aug. 4, 1965, *Ben L. Dolbeare 311* and *312*. Originally collected in the Druce Lake locality, but not identified, by *Gregg Tichacek*, Sept. 9, 1964. VERMILION CO., *Ruppia maritima* L., 3 mi. NE. of Oakwood, Kickapoo State Park, in a strip mine pond called "Inland Sea". Abundant along the shallow margin of the pond and apparently established in water with a pH of 8.5. Sept. 18, 1964, *G. S. Winterringer 22449* and *22451*. Originally collected in the same locality, but not identified, by *Rudy Steinauer*,

Sept. 9, 1964. LAKE CO., *R. maritima* L., growing in Lake Zurich near Lake Zurich village. Sept. 28, 1965, *Alvin Lopinot.*

A third aquatic plant found recently in Illinois, *Najas minor* All., was reported in 1964 by Stookey, Fore and Mohlenbrock in *Castanea:* 29, pages 151 and 153. This naiad was first brought to the writer's attention in October 1963 by Alvin Lopinot who had collected it in Wayne and Greene counties. The museum herbarium now has specimens of *N. minor* from 31 additional counties in the southern three quarters of Illinois, extending southward from Henderson and Iroquois counties.

Procedure of handling specimens in the laboratory may be of interest. Each collection, with its numbered data sheet, was placed in plastic ice cream containers or floated in the sink during examination. Identification was made easier by working with fresh and mature specimens. In preparing material for mounting we used a technique of floating delicate species, e.g., *Zannichellia palustris* L., on letter size bond paper. The film of water on the paper and specimen permitted final arrangements of the material by moving it with a small brush. The sheet of paper with the specimen was lifted carefully to remove most of the water, or the sink was slowly drained before lifting the sheet. The bond paper bearing its specimen was numbered from the corresponding data sheet, placed on blotting paper or drying sheets and finally inserted in a folder of newsprint. Thus, a press of wet specimens was ready for the dryer. When specimens on bond paper were thoroughly dry they were pasted on standard herbarium sheets to avoid additional handling of the dried specimen. Drops of Duco cement or very narrow strips of gummed cloth were used to secure loose parts wherever needed. The cement also permitted fastening loose achenes of *Potamogeton* and fruiting parts of various other species. We have added approximately 2000 sheets of aquatics to the museum herbarium as a final result of the work described above.

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